E. Papuci-Władyka, E. F. Redina, J. Chochorowski,
J. Bodzek, W. Machowski *

Greek Settlement on the Northern Black Sea Coast. Polish-Ukrainian excavations in Koshary (Odessa province): Third preliminary report – Seasons 2000-2003

Since 1998[1] the archaeological excavations at Koshary have been conducted for the past six seasons, that is, by a joint Polish-Ukrainian expedition of the Institute of Archaeology of Jagiellonian University, the Archaeological Museum of the Ukrainian National Academy of Sciences in Odessa and the Department of Preservation of the National Heritage at the Province Administration of Odessa. Funding for the project was provided by the Jagiellonian University, the State Committee for Scientific Research of the Republic of Poland and private sponsors (Papuci-Władyka 2003, 33). On the Ukrainian side, the project was financially supported by the Department of Preservation of the National Heritage and the Odessa branch of the Hellenic Foundation for Culture[2].

The complex of ancient sites near the modern village of Koshary[3] is situated approximately 40 km to the east of Odessa, on the western side of the Tiligulskii Liman, ancient Axiakos (Fig. 1). It occupies a high promontory with a neighboring plateau, now situated some 700 m from the present coastline standing around 25 m above the level of the wide, silted-up Liman delta. The main part of the complex was a settlement (small town) located on top of the promontory where the remains of stone architecture can still be seen on the surface. Steep slopes delimited the town on the west and south; to the southwest, there was a deep ravine. An open-air altar – the Russian *zol'nik* (like Greek *eschara*) – can be seen in the field on the southeastern edge of the promontory, somewhat below the plateau. To the northwest, this plateau gives way to an extensive hilltop occupied by a fairly big necropolis.

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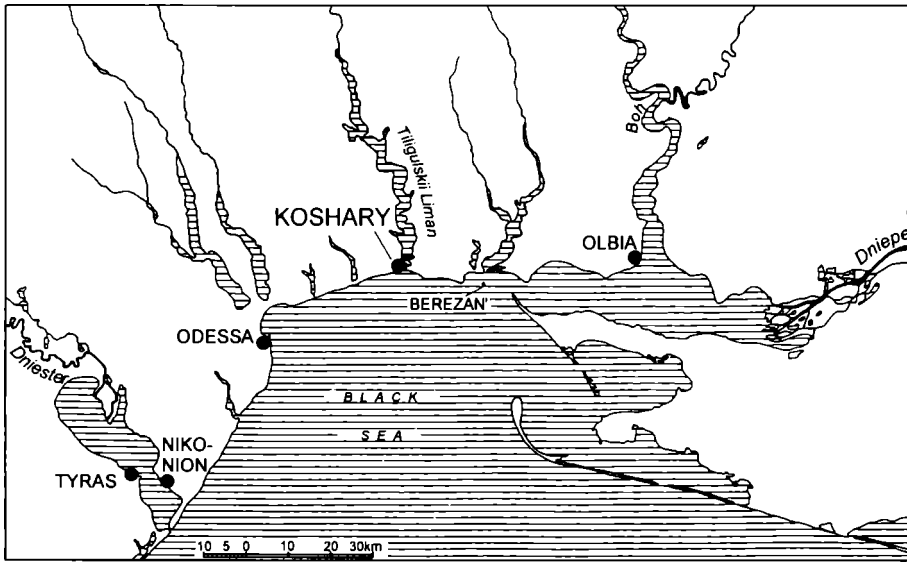
* With contributions by T.L. Kokorzhitskaia, L.V. Nosova, M. Kania, A. Kowal, A. Leśniak-Bochnak, N. Mateevici, M. Woźniak.

[1] The excavations have been directed jointly by E. Papuci-Władyka (Polish side) and E. F. Redina (Ukrainian side). In 1998-2000, J. Chochorowski directed the work in the Polish sector of the necropolis. The exploration of part of the trenches in the settlement was supervised by J. Bodzek (1998-2001 and 2003) and W. Machowski (1998-2000). The latter was also in charge of fieldwork in the Polish sector of the necropolis since 2001. The Ukrainian sector was supervised by the following: in 1998-2001, T.N. Kokorzhitskaia (settlement), L.V. Nosova (*zol'nik*) and V.G. Petrenko (necropolis), and in 2002-2003, N. Mateevici of the National Historical Museum in Kishiniov (Republic of Moldova). The photographers were L. Chochorowski (1998-2000), R. Słaboński (1999, 2000, 2002) and W. Machowski (all campaigns). Starting from 1999, K. Kaczanowski and A. Kosydarski of the Chair of Anthropology, the Institute of Zoology, Jagiellonian University, joined the team to study the skeletal material (the participation of the anthropologists is funded entirely by the resources of the Chair of Anthropology). Archaeology students from the Jagiellonian University, the University in Odessa and, since 2003, the University in Kishiniov have been gaining field experience through participation in the excavations.

[2] Before: Foundation for Greek Culture.

[3] Koshary belongs to the Kominternovskii district of Odessa province.



1. Koshary. The localization of the site on the northern shores of the Black Sea.

The region has long attracted the attention of archaeologists because of the frequent references in the works of ancient authors mentioning in the territories west of Olbia and the Borysthenes River (the modern Dnieper) Greek cities of the likes of Odessos[4], Skopelas, the sea ports of Istria and Isia, and a harbor at the mouth of the Axiakos (*Plin.* IV, 82; *Ptol.* III, 5, 14; *Arr.* 31; *Ps.-Arr.* 87). Pomponius Mela (1st c. AD) reported that the border between the tribes of the Callipidae and the Axiakae ran on the river Axiakos (*Pomponius Mela* III, 2, 7; cf. Redina, Chochorowski 2001, 139).

Eminent archaeologists of the early 19th century – I.P. Blaramberg, A.S. Uvarov, F.K. Brun and E.R. Stern – concentrated on mapping the cities and ports of the region. A.S. Uvarov, I.A. Stempkovskij and V.I. Goshkevich were especially interested in the localization of Odessos. The first field survey of the basin of the Tiligulskii Liman was conducted by L.M. Slavin in 1950 with the objective being to trace the boundaries of the *chora* (agricultural zone) of Olbia. The results of the survey were never published; the project was mentioned by E.A. Symonovich (1954, 148, note 4). The work resulted in the discovery of ancient settlements near the modern village of Koshary (initially interpreted as a stronghold, Kosharskoe Gorodishche, because of the allegedly visible fortification remains). E.A. Symonovich (1954, 146-150), who attempted to identify the site with the ancient Odessos, conducted the first excavations at Koshary in 1955. He returned to continue the fieldwork in 1964-65; in the following years (1967-1968, 1980 and 1987-1991), the research was carried on intermittently by E.I. Diamant, E.A. Levina and E.F. Redina.

The Koshary site, which presumably belonged to Olbia, one of the most influential Greek city colonies in the Black Sea littoral, lends itself perfectly to comprehensive research. The

[4] This is a second ancient Odessos; the first one, identified with modern Varna in Bulgaria, is older (established in c. 610 BC).

present Polish-Ukrainian project aims at determining the nature of the Koshary complex and its position within the Olbian *chora*, as well as in the *polis* of Olbia itself. Another objective is to define the character of the relations between the Greek colonists and the native tribes, chiefly Scythians. In effect, the researchers hope to verify the hypothesis identifying the settlement of Koshary with the ancient city of Odessos. Systematic archaeological research is coupled with rescue excavations necessitated by the extensive modern plundering of the site.

The emergence of the Koshary complex can be linked with a new wave of colonization, effected in the Black Sea littoral by the Greeks already settled there, sometime around the end of the 5th and beginning of the 4th centuries BC. New Greek settlements were established between the Dniester and Tiligulskii Liman, in the neighborhood of thriving cities in the basin of the lower Boh and Dniester rivers (e.g. Olbia and Tyras, respectively). Koshary was one of these new foundations. The natural defensive location on a high promontory close to the seashore was the key to its prosperity. It should be kept in mind that in antiquity the seacoast was much closer to the site than it is today and the Liman was connected with the Black Sea .

Every year since 1998 the Polish-Ukrainian excavations at Koshary have encompassed the settlement, the *zol'nik* and the necropolis. Trenches excavated by the Polish team are located in the settlement (IV, VII and VIII) and in the necropolis, whereas trenches supervised by the Ukrainian side covered the settlement (trenches III and VI), the *zol'nik* (trench V) with surrounding area and the remaining part of the cemetery. In six years of research, almost 1000 m² have been investigated in the settlement (trench III 250 m², trench IV 450 m², trench VI 175 m², trenches VII and VIII 100 m²), 275 m² in the *zol'nik* and vicinity, and some 4800 m² in the necropolis, where close to 200 graves and related structures have been uncovered[5]. The extensive and informative artefactual assemblage recorded from the site has provided evidence of habitation from the beginning of the 4th century BC to the mid 3rd century BC. The presence of artifacts dating from the late 5th century BC could be proof of earlier settlement origins, but the scarcity of these finds hardly undermines the widely accepted chronology. Even if the promontory was occupied in the late 5th century BC, the population must have been insignificant. This also holds true of the first settlement phase, i.e., in the first half of the 4th century BC.

Research, to date, has failed to provide sufficient evidence for the identification of Koshary with the ancient Odessos. A related issue is the termination of settlement on the site. The middle of the 3rd century BC has been suggested, based on archaeological material dated through analogies. No evidence of the Middle and Late Hellenistic periods has been found and artifacts from the Roman period are also lacking, contrary to Symonovich's opinion (1954, 149) stating the presence of Roman pottery at Koshary; as the author did not publish any details of the pottery, his conclusions regarding the Roman date of some of the ceramics cannot be verified. It is true that all the mentions of the site come from the above mentioned Roman sources, but it is also a well-known fact that the ancient erudite writers and geographers frequently worked under the assumption that the cities and ports they were writing about were still inhabited in their time. In view of the above, it seems that the matter will be resolved only with a fortuitous discovery of relevant epigraphical sources.

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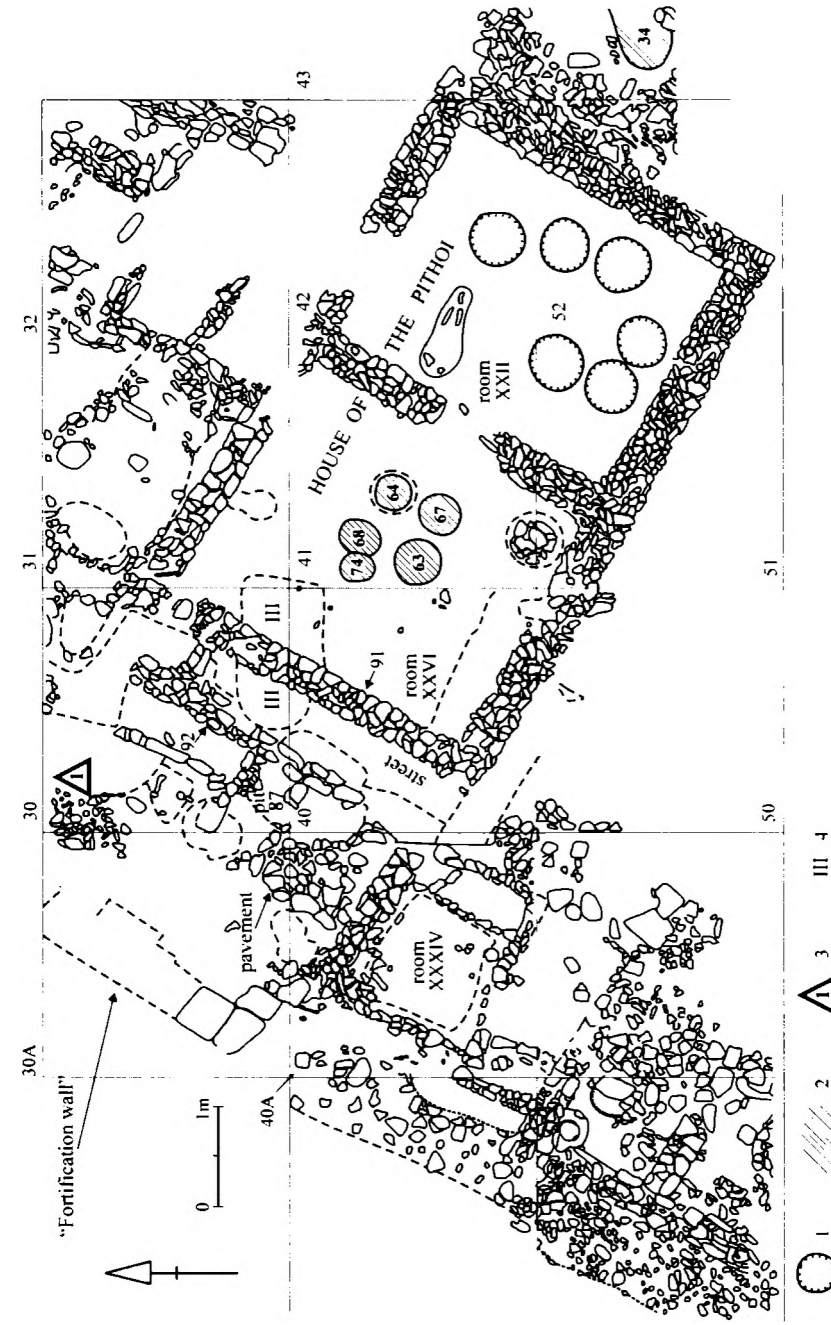
[5] In the past, 43 ancient structures were excavated, setting the total for excavated structures, together with the ones uncovered in 2003, at 250.



2. The settlement, trench III in 1999-2001, plan: 1 – pithoi, 2 – pits, 3 – hearth, 4 – sunken house III.

The Settlement

Recent Polish-Ukrainian explorations have demonstrated that in antiquity the Koshary site was a Greek town of considerable size most likely marking the westernmost extent of the Olbian *chora* (Diamant 1978, 241-249). The settlement followed the typical Greek urban layout with streets intersecting at right angles and partly paved. The uncovered architecture residential consisted of big multi-room houses made of clay and stone or simply stone, sometimes including cellars and accompanied by the typical dugout huts. Units with a domestic function typically featured storage pits, enclosures, hearths and the like.

Two occupation phases were distinguished in the settlement; one was dated to the first half and third quarter of the 4th century BC while the other to the last quarter of the 4th century BC and first half of the 3rd century BC. The only spot where three building phases were distinguished was a terraced structure in trench III, situated in the northeastern part of the settlement (see below). In the reported period, excavations were continued in trenches III and IV, which were opened in 1998 in the part of the settlement and believed to be of biggest significance, and in the newly traced trenches VI, VII and VIII.

The alleged stone "fortifications" that led the first researchers, Slavin and Symonovich, to interpret the site as a stronghold, were located reportedly in the northeastern part of the settlement, near trench III (Chochorowski *et al.* 1999, 59; 2000, 187; Papuci-Władyka 2002, 11-12; Papuci-Władyka *et al.* 2004, 52). This area is elevated compared to the rest of the ground, which slopes westwards. Thus, it was believed that the town was situated largely in the eastern and northwestern part of the promontory and behind the line of fortifications cutting it off from the west. Nothing remotely like a defensive structure could be seen on the ground when the Polish-Ukrainian expedition began work in 1998 and a trial pit dug across the presumed line of fortifications revealed no architecture of any kind. The rising ground west of the ancient ruins turned out to be entirely natural and it now seems the part of the settlement excavated in trench III did not extend any further in this direction.

Work undertaken presently in the northwestern part of trench III (Figs. 2-4) constituted a continuation of the previous excavations of 1990 that had brought to light a building with *pithoi*, or clay barrels (Fig. 2: 1), dating from the first half of the 4th century BC (Redina, Chochorowski 2001, 143; Chochorowski *et al.* 2000, 187f.). In this year and the following season, room XXVI, adjoining room XXII of the same house on the west, was partly excavated (squares 50 and 51). Between 1999 and 2001, the Polish-Ukrainian expedition concentrated on completing the clearing of this room and on tracing the west wall of the "House of the Pithoi" (Fig. 2, wall 91). The western and northern boundaries of the complex were established; surviving walls in the northwestern part of the building were cleared and the fill of the pits identified in this area was examined. The two rooms belonged to a structure that was composed of at least two large chambers and was connected with the older settlement phase. However, room XXVI appears to have been added onto the "House of the Pithoi" sometime in the mid-4th century BC, that is, in the terminal period of the building's operation.

The most important results of the fieldwork in 2000 was the identification of three phases in the settlement architecture, in the excavated part of trench III and the discovery of the remnants of a "fortification wall" (Figs. 2-3). A big pit, serving presumably as a sunken house, belonged to the two first phases (Fig. 2: no. III, below wall 91 of room XXVI); the same should be said of pit 87 (Fig. 2: under wall 92, squares 40, 30), which could also have been a sunken house; originating from the last phase were various complexes of features and room XXXIV (square 40-A), described below.

Sunken house III was oriented east-west (Fig. 4). It was sunk into the ground and featured an atypical shape, its eastern end being rectangular and its western one forming an apse. It measured 3.4 m in length, 1.6 m in width in the eastern end and 2.2 m in the western one. Its depth into virgin soil was 1.2 m. Tracing the connection between the two parts of this feature was impeded by wall 91, which ran across the pit and which was not dismantled in view of the local authorities' project to preserve the site for tourists. Both parts of the feature in question were covered with thin layers of pure loess (10-15 cm thick) intercalated by thicker layers (15-30 cm) of gray soil mixed in with an insignificant amount of finely crushed ceramics. A stone wall facing was encountered in the western end of the structure at a depth of 0.5 m. It was composed of one or two courses of stones bonded in a lime-clay mortar. The stone used was chiefly nummulithic limestone and sandstone, supplemented in some spots with sun-dried bricks and big pieces of ceramic roof-tiles; mud bricks were the sole material used for the lower parts of walls, up to a height of 0.25 m. The described wall facing measured c. 0.35 m in thickness. The floor in both parts of the sunken house was even; the only depression in it, c. 0.30 m deep and of unknown purpose, was discovered in the southwestern corner. The finds, chiefly from the upper layers of the fill, were dated to the first and second quarter of the 4th century BC. The feature may have above been a complex of two pits or a sunken house with the west end reinforced by the wall facing described, which would have thus acted as a kind of casing wall for the terrace and wall 92 lying higher up. The layered fill of the fit proved useful as a foundation under wall 91 which was part of the later architecture built in this spot (cf. Fig. 2).

As stated earlier, pit 87 (squares 30, 40, Fig. 2) was found under wall 92 and was either a sunken house or a house cellar; another two walls (nos. 93 and 94) ran over the pit in its western end. All three of these walls were undoubtedly later, especially in view of the fact that the pit appears to have been intentionally leveled with gray loess to form part of the foundation under wall 92. The feature is rectangular; 0.86 m deep (cut 0.30 m into virgin soil). The finds consist of chiefly potshards and large amounts of faunal remains. One of the shards identified was a piece of Thasian amphora datable to the second and third quarter of the 4th century BC. The pit is likely to have belonged to the first-second settlement phase.

Features identified as belonging to the early settlement phases were discovered also in squares 31 and 32. These were pits or sunken chambers. One of these had a partition consisting of untouched virgin soil in the central part; the higher-lying parts of the fill yielded a big bronze coin, an "As" of Olbian issue (cf. below).

The discovery of what was provisionally termed a "fortification wall" on the highest built-up terrace of trench III (Fig. 2, squares 30A, 40A and western parts of squares 30 and 40) is of immense importance. The remains consist of three huge limestone slabs lying flat in a shallow trench dug specifically for that purpose in virgin soil. While most of the wall has disappeared, the trench left over from its dismantling is clearly visible. Underlying the surviving slabs was a rubble bed, 0.10-0.25 m thick. The width of this alleged "fortification wall" varied from 0.8 to 2.15 m. It should be assumed that the wall represents the earliest phase in the existence of the settlement.

Numerous architectural and non-architectural features were discovered east of this wall (Fig. 2: squares 40A and 30A). Distinct among these are the ruins of a four-chamber building and a fragmentarily preserved cobbled pavement running parallel to the "fortification wall". The pavement is part of a courtyard used for domestic purposes to judge by the evidence of small pens, pits and a hearth discovered here (Fig. 2:3). The building was obvi-

ously intended partly for habitation and partly for domestic activities. The end of the 4th century is a likely date for this complex, placing it thus in the last settlement phase.

Room XXXIV, which was fully explored (square 40A, Fig. 2), was an aboveground structure following a northwest-southeast orientation; it had an area of almost 10 m² (3.45 by 2.80 m). Inside, parallel to its east wall and at a distance of 0.70 m from it, there was an enclosure set off by a wall of polygonal blocks of mixed limestone and sandstone. To the north, this wall reached yet another secluded area – a semicircular enclosure in the northeastern corner of the room. This enclosure cut off from the rest of the room with three limestone blocks set up on the shorter ends like orthostats. The northwestern corner of the room yielded a haphazard pile of polygonal limestone blocks with traces of burning; the feature was presumed to constitute the remains of a hearth. The bottom part of a Thasian amphora was found sunk into the ground in a corner between the south wall of the room and the wall of the enclosure. The amphora fragment can be dated to the late 4th - early 3rd century BC.

A narrow street (or cul-de-sac) separates the architecture on the highest terrace from structures found on the lower-lying one. This tract was not paved and follows a north-south orientation (Fig. 2, squares 40, 30).

In subsequent field campaigns trench III was enlarged to the southwest and then to the north in an effort to trace a continuation of the alleged defense wall and the northern extent of the settlement, believed not to extend beyond a natural gulch observed just to the north of the trench. These objectives still remain to be achieved mainly due to difficulties in excavating archaeological features that lie at considerable depths in the squares dug in the north part of trench III.

Fieldwork in trench IV (Chochorowski *et al.* 1999, 59-61; 2000, 188-195; Papuci-Władyka 2002, 12-13; Papuci-Władyka *et al.* 2004, 51-52) in 2000-2003 (Figs. 5-8) concentrated on finishing the exploration of squares nos. 9-12 and Feature no. 1, discovered in 2000, as well as new squares nos. 13-16. Further architectural remains and numerous pits were revealed, including one huge atypical pit no. 48 (Fig. 5).

More of the plan of House 2 was uncovered. The structure, like House 1, has been under exploration since 1998. While House 1 consisted of at least three rooms, House 2 appears to have been a very big complex with at least six rooms, of which four have now been investigated in their entirety (altogether 200 m² of the house have been cleared). The trench could not be extended any further to the east, where the promontory drops off in a steep slope, or to the north, where trenches from World War II have destroyed most of the ancient ruins. The street discovered in 1998 turned out to lead onto an open square in the west; its axis joins at right angle the axis of another street, actually a narrow unpaved alley, which also opened onto the square. The corner of yet another building wall was recorded to the west of this alley (Fig. 5).

The architectural remains discovered in trench IV belong to the last phase of occupation between the last decades of the 4th century BC and the first half of the 3rd century BC. However, some evidence of the earlier phases was also discovered. Feature no. 1, discovered in 2000 and excavated thoroughly in 2001, was an almost square structure located inside room 4 of House 2 and interpreted as a house cellar (Figs. 5, 6). It was 4.5x3.8 m big and was sunk to a depth of 1.60 m. The walls were built of well dressed and fitted blocks of stone. The fill yielded a stamped amphora handle, originating from Thasos to judge by a well-dated stamp (the representation of a human hand and an *ethnikon*) of the city magistrate Deinopas, attributed to 316-295 BC (Papuci-Władyka, Kokorzhitskaia 2004, 323 Fig. 16).

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Fig. 3. The settlement, trench III, general view, 2000.

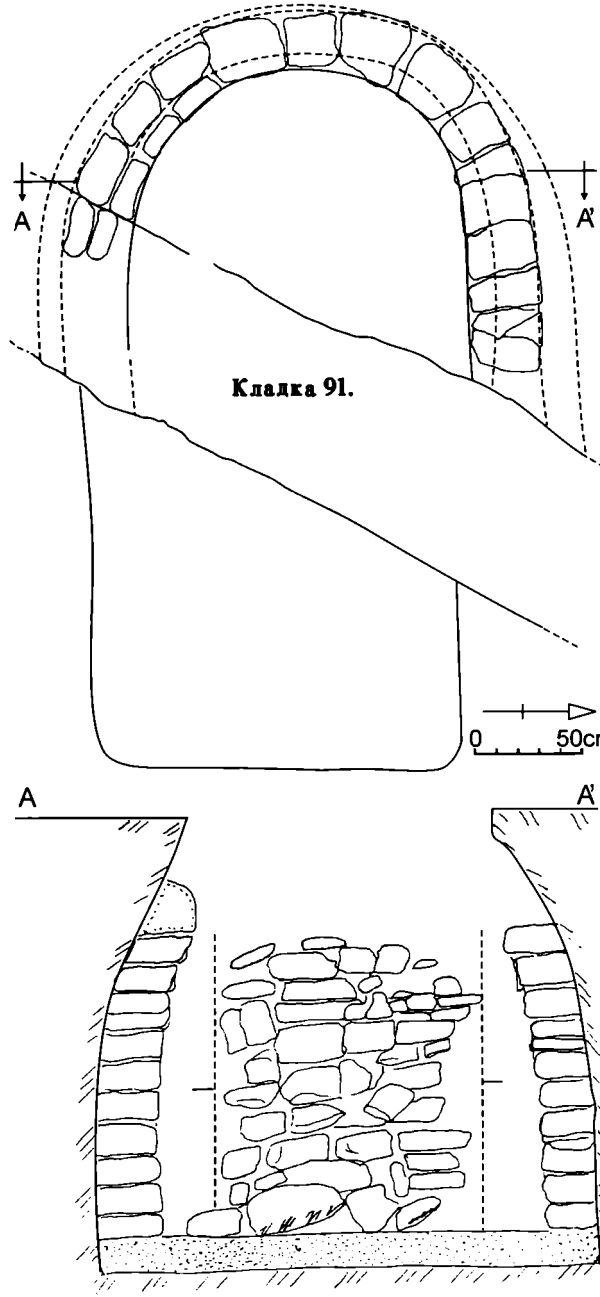

Fig. 4. The settlement, trench III, the sunken house III.

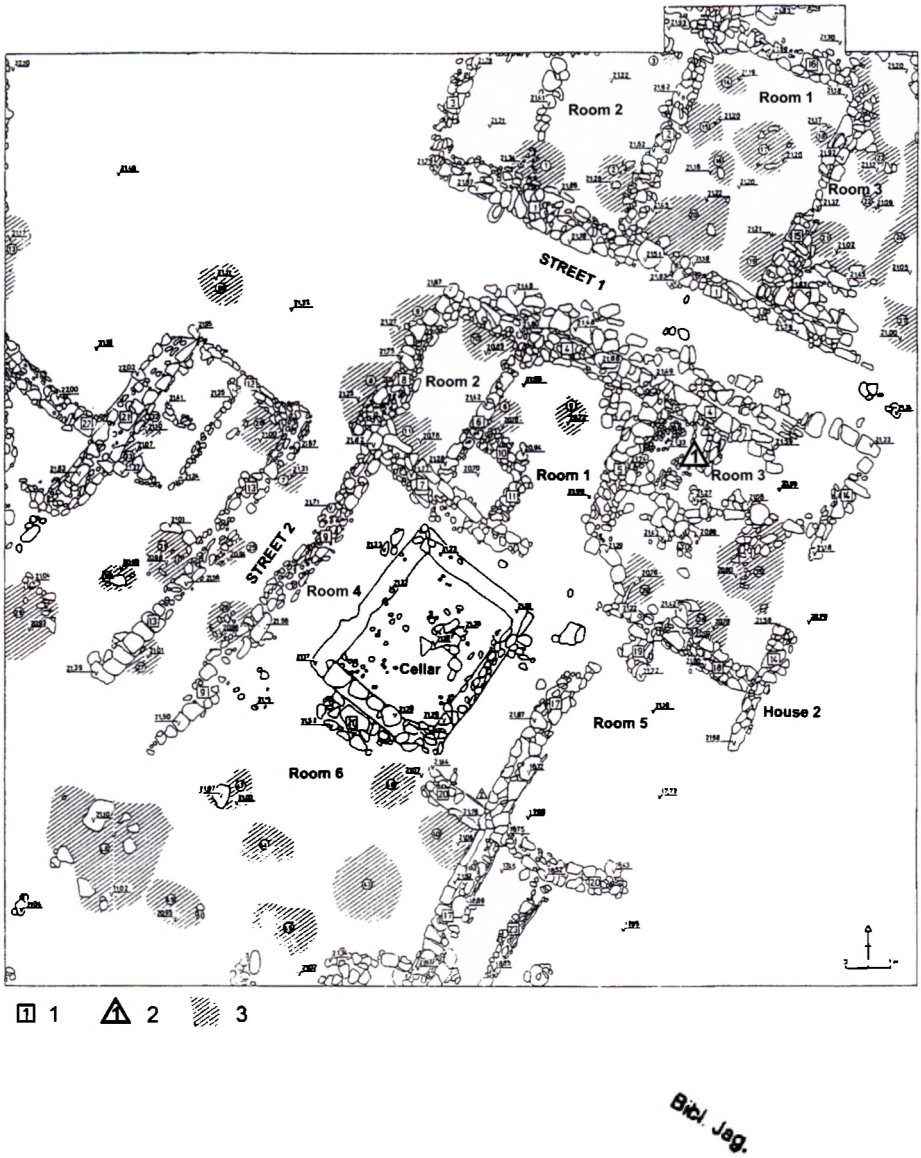

Fig. 5. The settlement, trench IV, 1 – walls, 2 – pits, 3 – hearth.

Fig. 6. The settlement, trench IV, general view with the cellar in House 2.

Fig. 7. The settlement, trench IV, pit 48: stone cover.

Fig. 8. The settlement, trench IV, pit 48: central stone enclosure.

Fig. 9. The settlement, trench IV, Heraclean amphora fragment with stamp on neck.

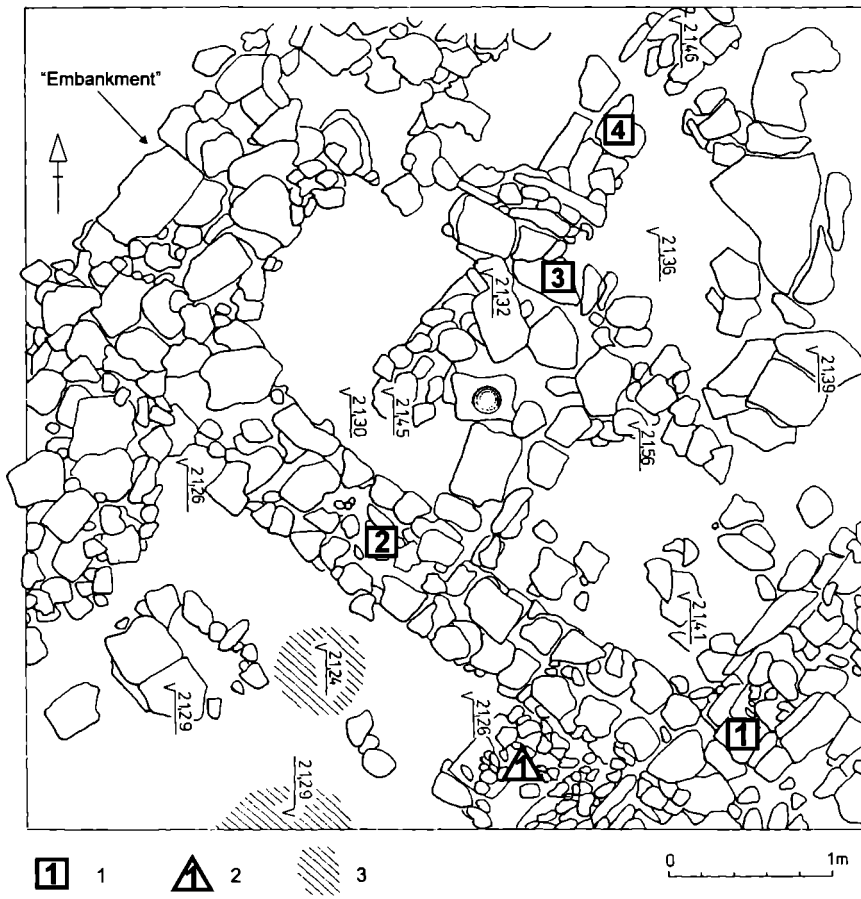

Fig. 10. The settlement, trench VII, square 1, level G: 1 – walls, 2 – pits, 3 – hearth.

Fig. 11. The settlement, trench VII, level G on squares 1 and 2.

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Fig. 12. The settlement, trench VII: the "embankment" on square 2.

Fig. 13. The settlement, trench VIII, square 2, object 5, the bronze coin from Olbia, c. 350-330 BC.

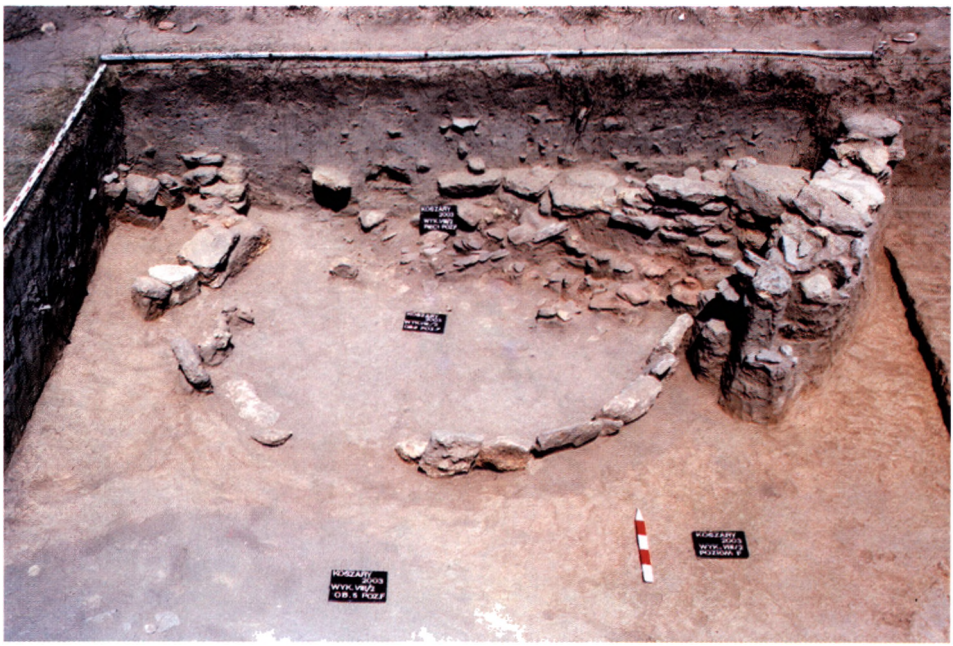

Fig. 14. The settlement, trench VIII, square 2, view of object 6 during exploration.

Fig. 15. The settlement, trench VI, general view.

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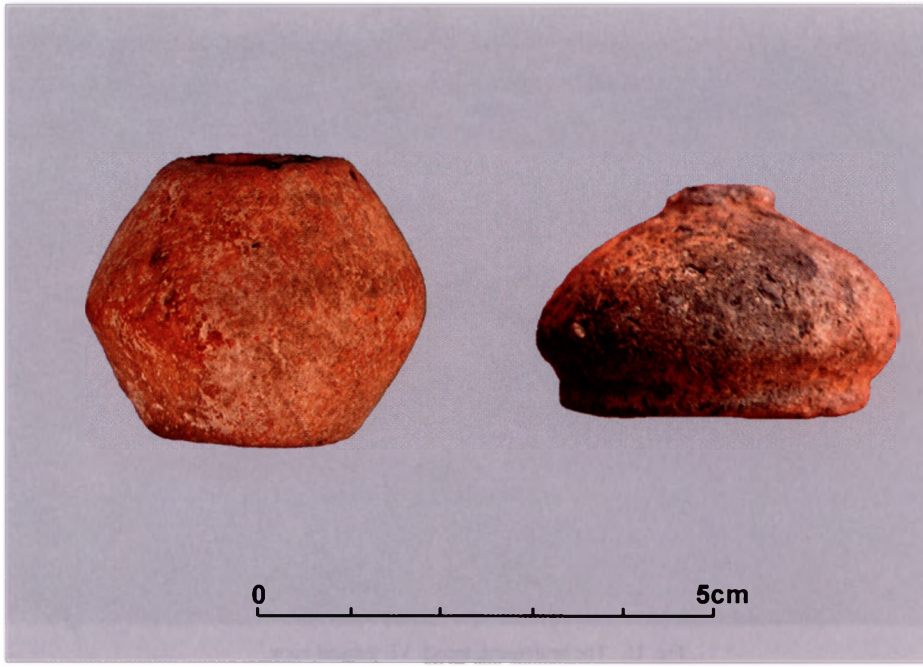
Fig. 16. The settlement, trench VI, the dugout with the niche.



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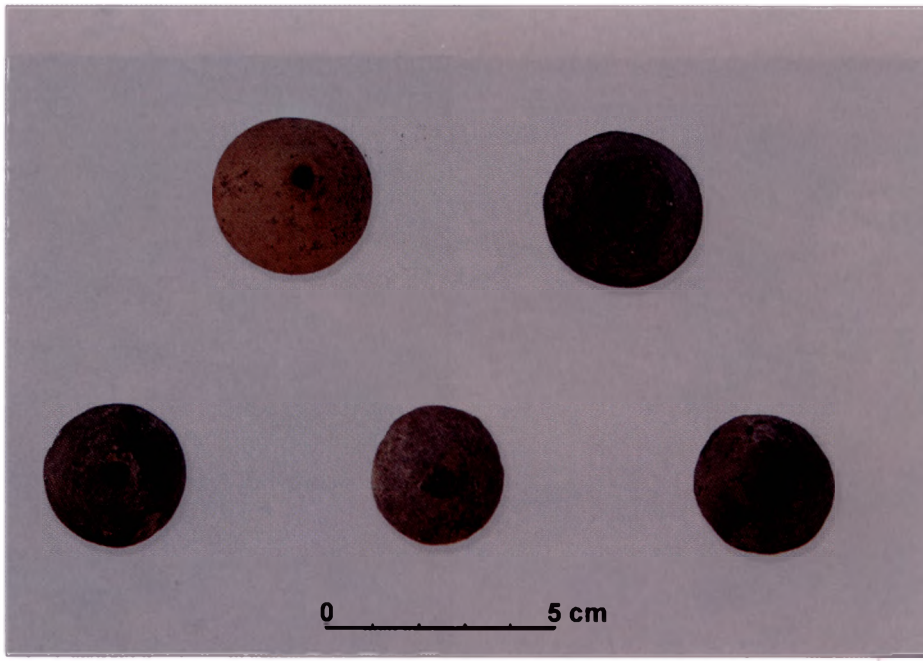

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Fig. 17. Clay spindle-whorls found in the settlement.

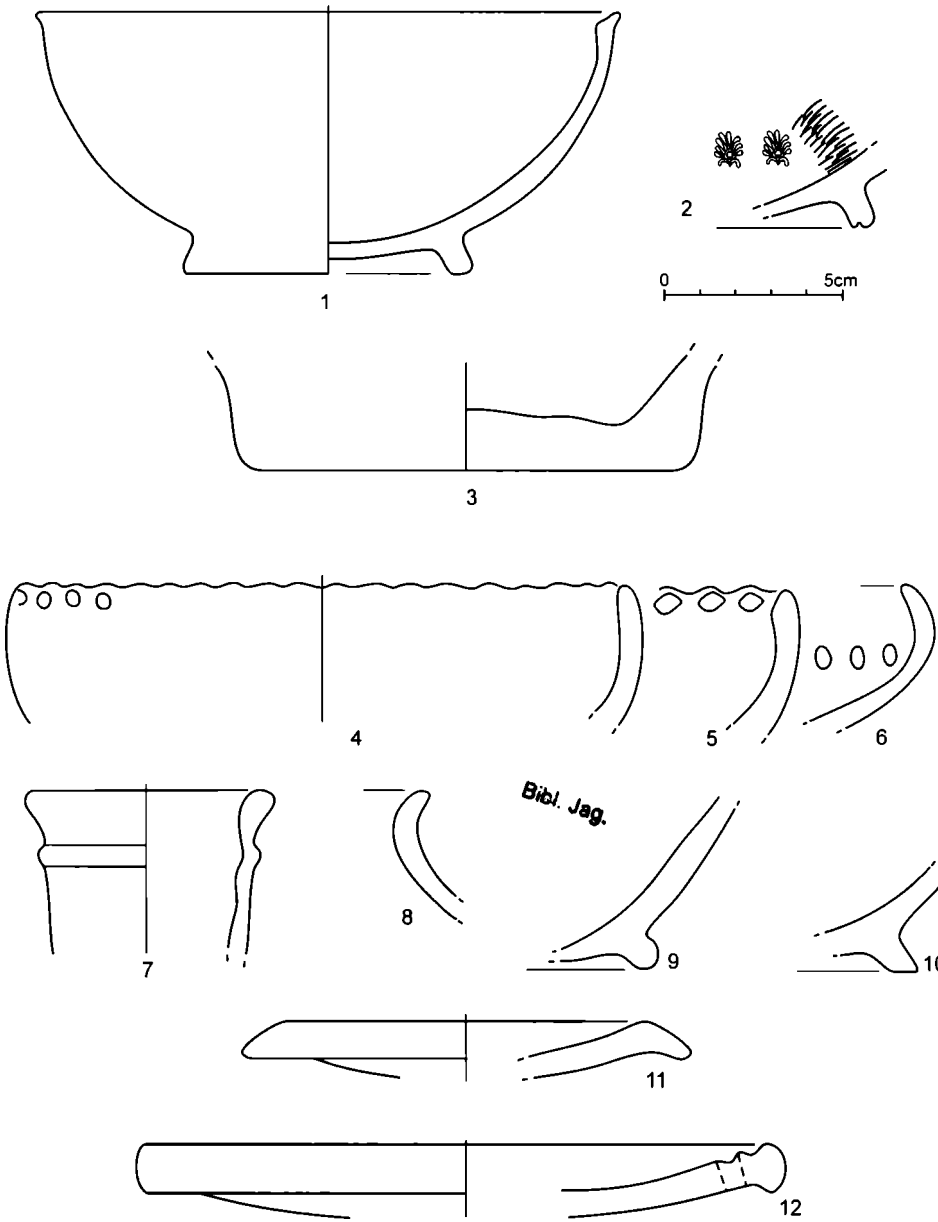

Fig. 18. Examples of vessels found in the settlement: 1-2 – black glaze ware, 3 – kitchen ware, 4-6 – handmade pottery, 7-12 – wheelmade gray ware.

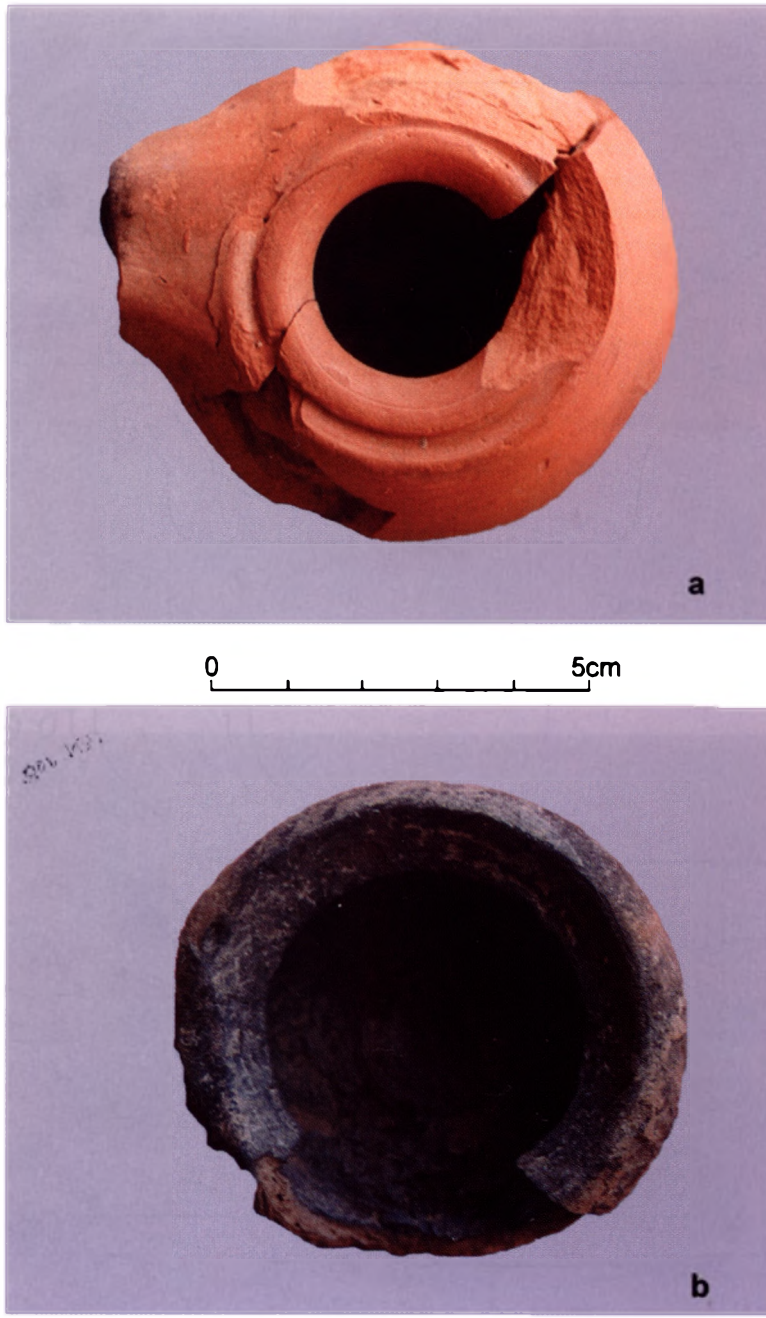

Fig. 19. Two clay lamps from the settlement.

Fig. 20. Koshary, general view of the site with the *zol'nik* in the foreground.

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Fig. 21. *Zol'nik*, the sequence of layers in the cross-section.

Fig. 22. *Zol'nik*, offering place.

Fig. 23. ***Zol'nik***, the finds.

Fig. 24. *Zol'nik*, the bronze coin from Olbia, ca. 300-275 BC.

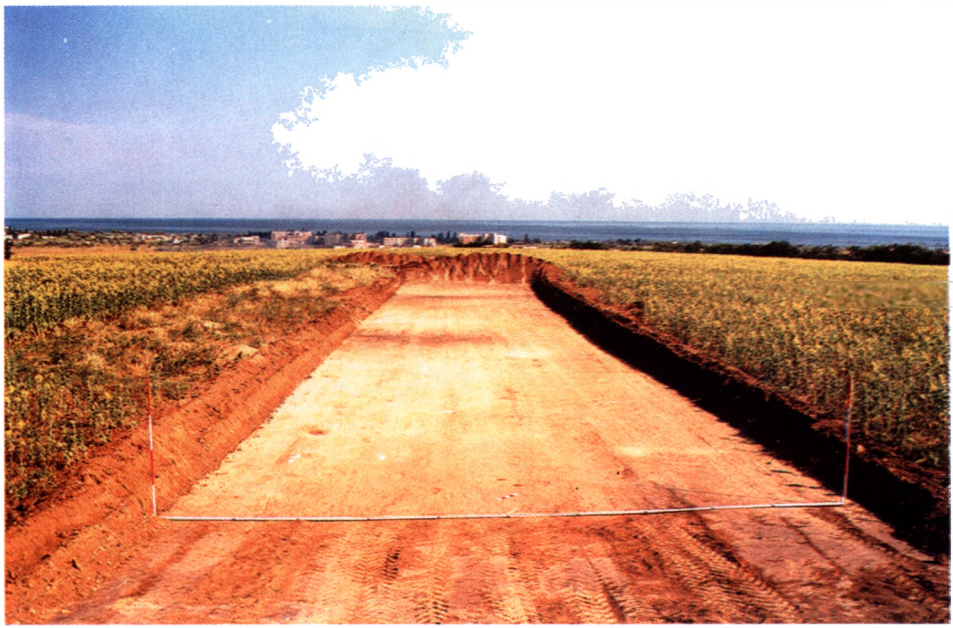

Fig. 25. Necropolis, general view in 2001 excavation season.

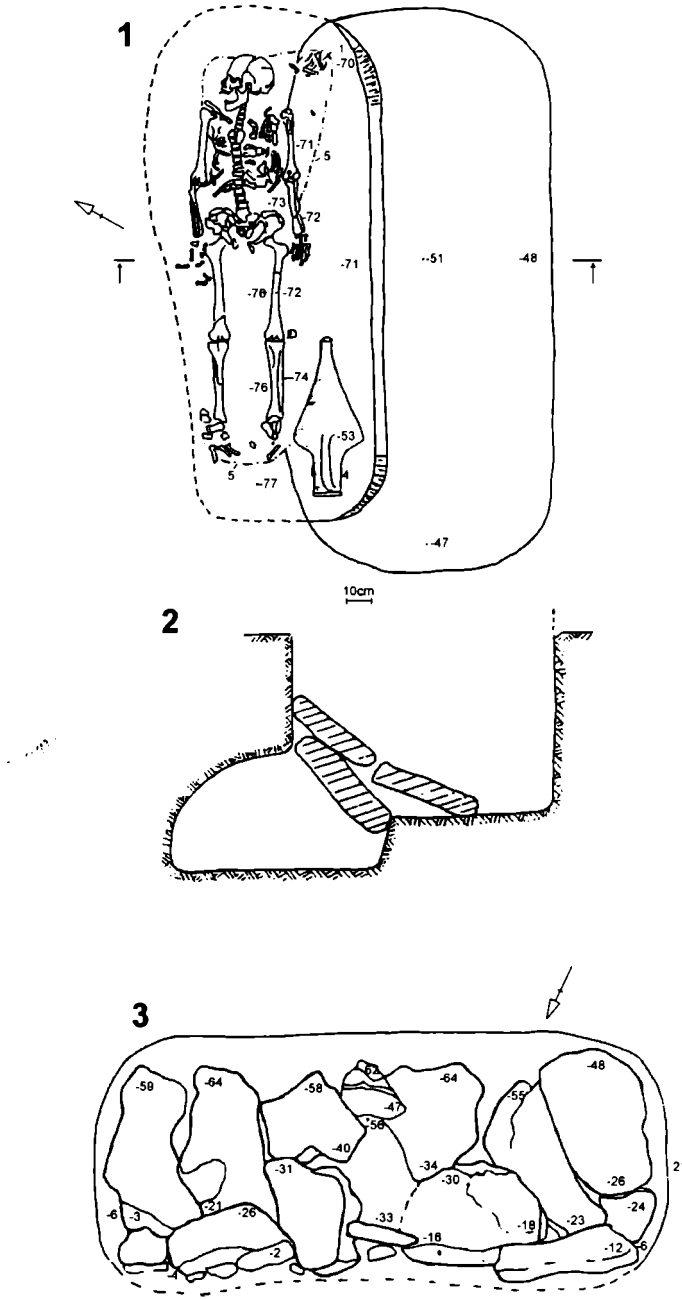

Fig. 26. Necropolis, niche grave 137: 1 – plan, 2 – section, 3 – wall closing the entrance to the niche.

Fig. 27. Necropolis, niche grave 211, the barrier wall blocking the entrance.

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Fig. 28. Necropolis, niche grave 107.

Fig. 29. Necropolis, niche grave 111.

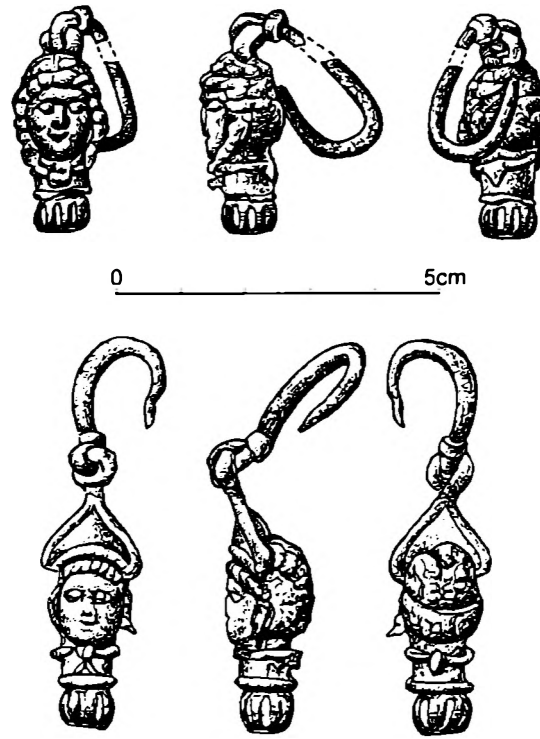

Fig. 30. Necropolis, silver earrings from niche grave 111.

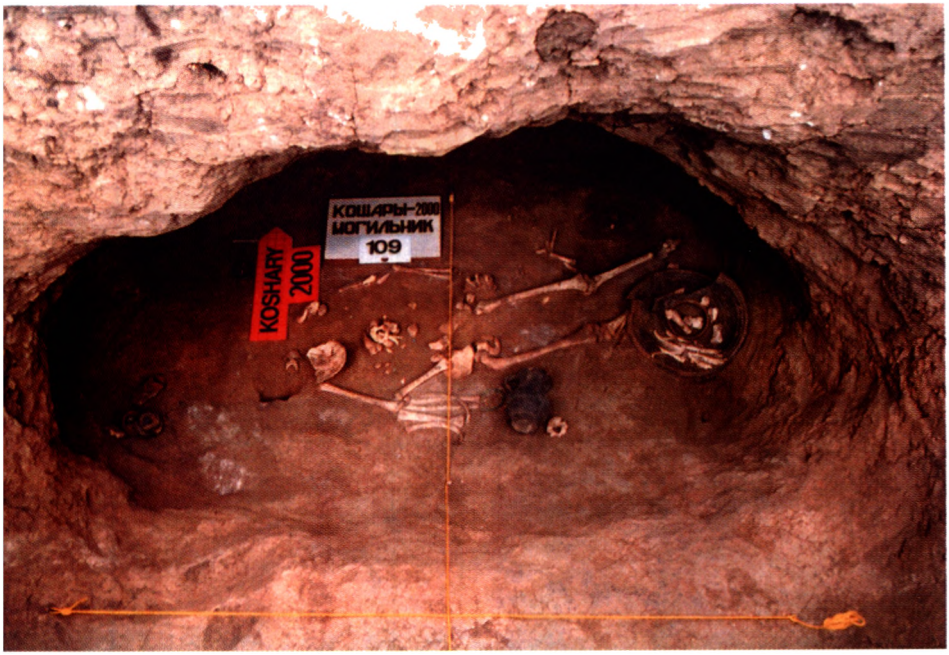

Fig. 31. Necropolis, niche grave 109.

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32. Necropolis, unplundered niche grave 213.

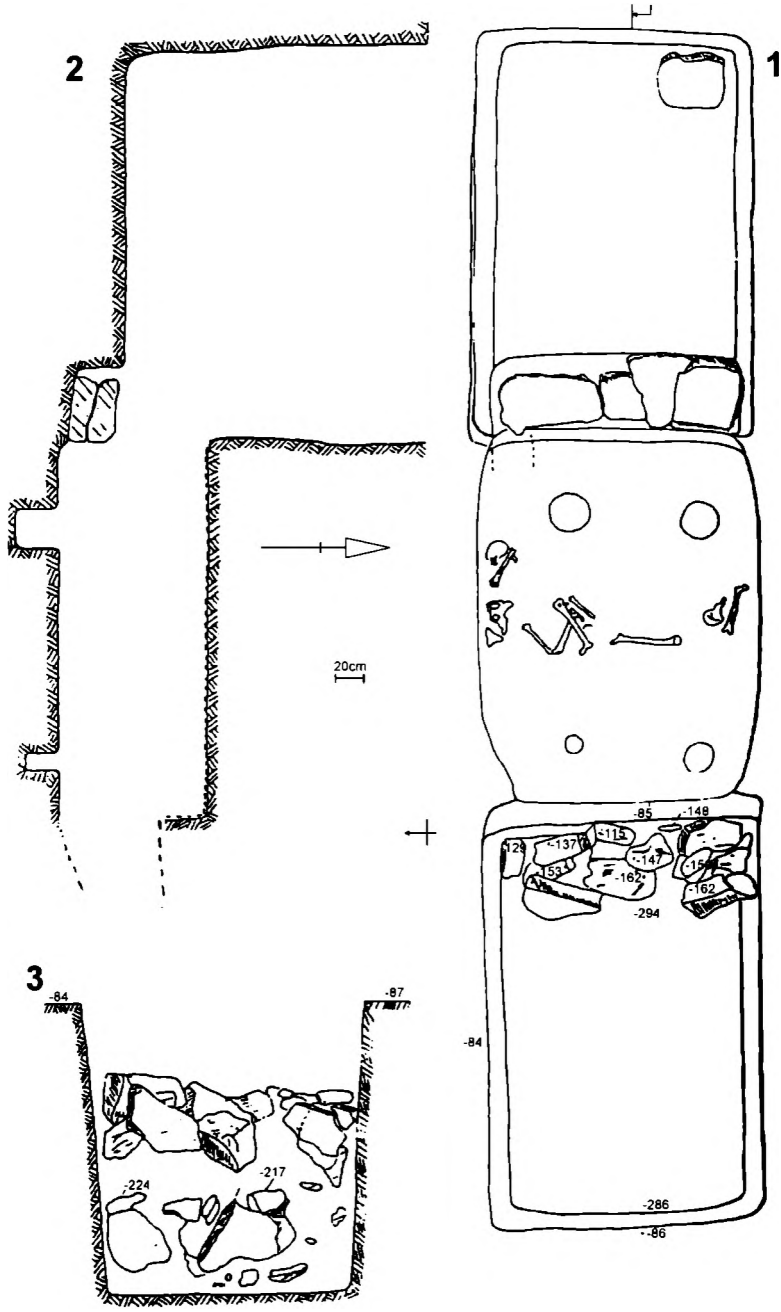

Fig. 33. Necropolis, chamber grave 151: 1 – plan, 2 – longitudinal section, 3 – section of the second entrance to the chamber with demolished closing wall.

Fig. 34. Necropolis, chamber grave 177, general view.

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Fig. 35. Necropolis, chamber grave 196, sun-dried brick wall blocking the entrance.

Fig. 36. Necropolis, chamber grave 194: bound slave buried close to the entrance.

Fig. 37. Necropolis, chamber grave 194: anthropomorphic stelae together with stone offering table and altar.

Fig. 38. Necropolis, cist grave 131.

Fig. 39. Necropolis, cist grave 231.

Fig. 40. Necropolis, niche grave 178 with bound "nanny".

Fig. 41. Necropolis, grave goods from undisturbed niche grave 213.

Fig. 42. Necropolis, grave goods from undisturbed niche grave 209.

Fig. 43. Necropolis, grave goods from niche grave 238.

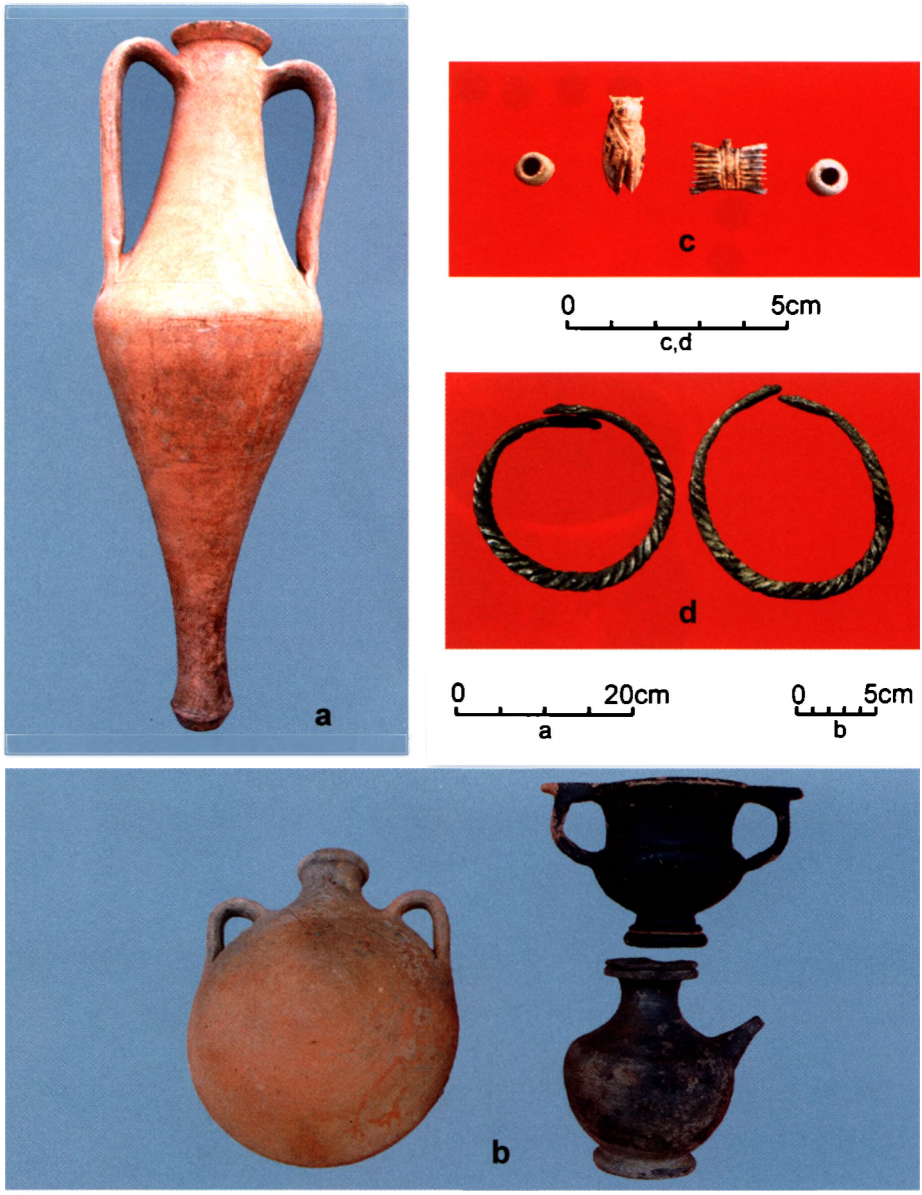

Fig. 44. Necropolis, grave goods from a child's burial in niche grave 211.

Fig. 45. Necropolis, arrow heads from cist grave 231.

Bibl. Jag.

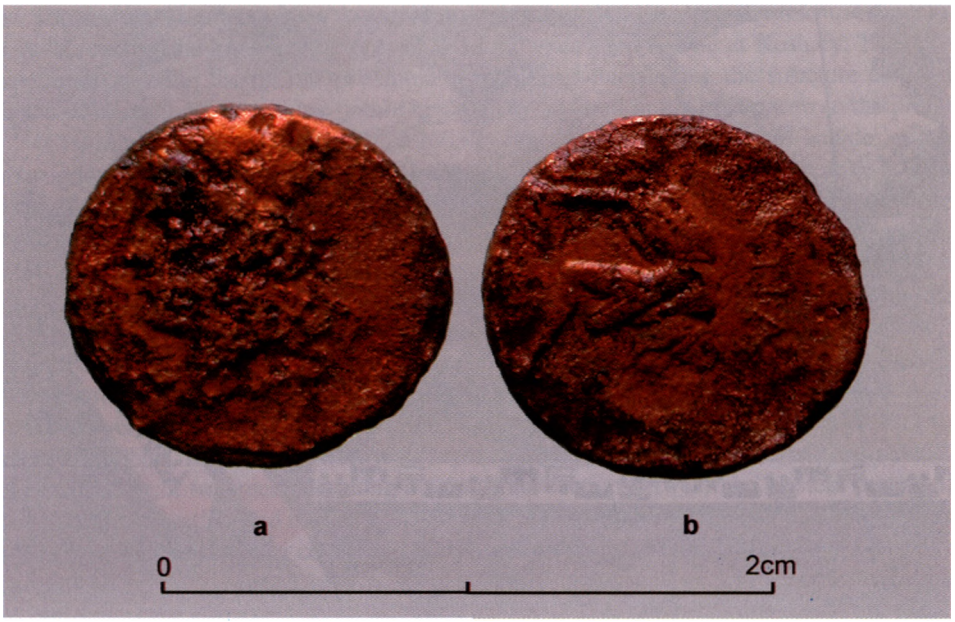

Fig. 46. Necropolis, niche grave 176, the bronze coin from Olbia, end of the 4th - first half of the 3rd c. BC.

Fig. 47. Necropolis, offering place 224 discovered in 2003 (detail).

Fig. 48. Necropolis, niche grave 174: the remains of a funerary feast.

The cellar must have been built prior to this date, probably during the earlier phase of occupation.

Approximately 50 pits, most of them of a storage character, were uncovered in trench IV. The largest pit (Fig. 5 no. 48) was discovered in square 16 in 2001 and explored in 2002. From the start, it was suspected of being a dugout hut of some kind. Digging 0.40 m down, we found a pavement of large stones and horizontally laid slabs covering the gray round feature, which measured approximately 3 m in diameter. Flat stones placed at an angle ran around the circumference (Fig. 7). Below, at a depth of 1.06 m on the west and 1.27 m on the east, a central stone enclosure was uncovered; it was also round, but of a smaller diameter than the pit. Two additional pits were detected to the west of the feature. These were presumably the post-holes of a construction meant to support some kind of lean-to roof. Further excavation inside the enclosure revealed, at a depth of 1.20-1.40 m, a layer of light yellow clay that had probably served as a floor. It was superposed on two enclosures of upright slabs, found at a depth of 1.50 m (Fig. 8). Once the 'floor' had been removed, the central part of the feature was excavated down to virgin soil occurring at a depth of 1.80 m. Not much pottery was recovered from this section. A wall discovered in the eastern part of the pit appears to have separated it from the neighboring feature (no. 47).

The assemblage recorded from pit 48 was typical of such structures. It consisted of considerable quantities of potsherds, a corroded bronze earring, a small bronze ring, a bone pin (awl), corroded iron and lead artefacts, a stone loom-weight, a black ring-stone of glass, clay spindle-whorls, a hand made lamp of gray clay, etc. Two stamped shards of Pontic Heraclea amphorae discovered below the stone pavement provided a date for the closed deposit in the pit. The inscription in two rows on the first fragmentarily preserved stamp reads 1)...*ΑΣΙΝΟ* 2) ...*ΜΙΑΛΛΑΚΩ[Ν*; on the second one: 1/...*Λ]ΕΩΝΙΔ* 2)...*ΑΙΣΙΜΙ* (Fig. 9). N. Mateevici has dated both stamps provisionally to the second half of the 4th century BC.

The feature may have been a sort of a dugout hut, but the central enclosure finds no parallels among the known structures of this kind excavated to date at Koshary. The stone pavement covering the pit has prompted a hypothesis interpreting the structure as a cult location, but nothing of a cultic nature has been discovered in the material from the pit.

In 2002, two trial pits (extended in 2003 to the size of regular trenches and designated appropriately as trenches VII and VIII) were traced in the area between trench IV and the open-air altar (*zol'nik* – trench V, cf. Fig. 20) with the purpose of testing the boundaries of the ancient site. It was hoped that the trial pit 1/2002 (later trench VII) would reveal any existing fortifications bordering the settlement from the west and possibly constituting an extension of the "fortification wall" discovered in trench III in 2000. Trial pit 2/2002 (later trench VIII), situated south of trench IV and closer to the *zol'nik*, was intended as a probe of any structures located in this area. The excavations in both trenches were continued in 2003.

An embankment-like construction, probably bordering the western part of the main settlement, was uncovered in trench VII (Fig. 10). It appeared to follow the same line as the above described "fortification wall" discovered earlier in trench III (Fig. 2). Oriented north-east-southwest, it was recorded along a 6.5 m-long section between the western part of the north baulk of square 1 and the western part of the south baulk of square 2 (Figs. 11, 12). The embankment consisted of a core of big stones covered on either side with piled up smaller and medium-sized stones. A huge tumble of stones to the west of this structure should be recognized as the collapsed upper parts of the "embankment". Investigations at the foot of the "embankment" revealed no structures and few shards of pottery. In the section further

west, the pile of rubble was thicker and contained some dressed blocks of stone. Before any final conclusions can be drawn more work needs to be done here.

Some structures belonging to the successive two phases of site occupation were also discovered in square 1 of trench VII (Fig. 10). Two intersecting walls and the remains of a fireplace and an enclosure were traced (Fig. 10, nos. 1-2) adjoining the presumed embankment. The findings will be verified once the investigations are completed in 2004.

In trench VIII, two typical storage pits (nos. 1 and 3) and one larger feature (no. 4) were discovered in square 1. The latter, presumably a sunken dwelling, was only partly investigated, since it lies mostly beyond the borders of the present trench. Two more pits (nos. 5 and 6) were cleared in square 2 of the trench. They were both exceptionally big. Feature no. 5 also could not be fully cleared for it extended into the southern and western baulks. The fill here was the typical gray and dark brown soil, some traces of burning, potsherds, stones, animal bones, mollusk shells and a few other objects, e.g. a small bronze coin (Fig. 13) provisionally dated to 350-330 BC (see below). Feature no. 5 must have been abandoned at about this date. As for feature no. 6, it turned out to be a semicircular pit bordered with stones, adjoining two intersecting walls and a hearth of pebbles. Another wall closed it off from the west. The border of stones around the pit had a break, possibly an entrance, on the south side (Fig. 14). A hard cream-colored clay surface (floor?) was recorded on level F; it covered the entire surface of the feature but appeared to be concentrated near the "entrance" on the west side and in the center of the feature. Two round post-holes inside the feature testified to the presence of some kind of roof-supporting construction.

Another trench, marked as trench VI, was opened in the 2002 field season. It was situated on the southwestern end of the promontory, west of the previously investigated area (Fig. 15). In 2003, it was extended to cover a total of 175 m². The uncovered remains, designated as Farm 1 (Russian *usad'ba*), consisted of stone-clay buildings concentrated around a small courtyard, which was partly paved with slabs of stone and had a well with a flat round stone covering the opening. One of the farm structures was a rectangular dugout hut with stone and clay walls, measuring 2.85x3.30 m and sunk 1.9 m below ground level. A niche had been hollowed in the north wall and two post-holes could be recognized on the floor. One of these post-holes was situated in the northeastern part of the dugout hut near the entrance (Fig. 16). It was observed that the post must have been sharpened at the end that was dug into the ground and had small stones piled around it at the base to stabilize it. The dugout hut obviously preceded the farm structures, for it was filled to the top with loess containing small number of potsherds. A storage pit connected with the farm was dug into it later.

Cooking facilities including a hearth, storage pits and enclosures from the period of the functioning of the farm were cleared in the northwestern and eastern parts of the complex. The hearth was made of layers of pebbles covered with limestone slabs. A rectangular stone-paved enclosure stood to the north of the hearth and another structure with flat slabs of stone set on edge was found to the west of it.

The inhabitants of the settlement engaged in farming, fishing (presumably also for trading purposes), weaving (Fig. 17) and other activities such as trade and exchange. The latter was proven by the presence of a great number of imported goods, mainly pottery. Potsherds are the most common find at the Koshary site (Fig. 18). The prevailing form were amphorae, in which wine and some other products were imported from the Greek colonies in the Black Sea littoral, such as Pontic Heraclea, Sinope and Tauric Chersonessos, as well as from other, more distant centers like Thasos, Chios, Mende, Peparetos, Cos, Cnidus, Akanthos, Rhodes;

amphorae of Solocha I type were also discovered (Papuci-Władyka, Kokorzhitskaia 2004, 313-324). A coarse, handmade gray ware represents the indigenous Scythian tradition. Wheel-thrown pots of the so-called gray ware and red clay vessels, as well as cooking pots could have originated from Olbia (Kowal 2001, 197-211). Luxury tableware (black glaze and red-figured pottery) was imported from Athens and in small quantities from Asia Minor. Some lamps were also recorded (Fig. 19).

The coins found at Koshary are mainly of Olbian origin. In 2000-2003, there were 16 bronze coins registered, found for the first time not only at the settlement, but also at the *zol'nik* and the necropolis. Overall, of the 30 coins discovered since 1955 (Karyshkovskii 2003, 294; Symonovich 1969, 105-106; Diamant 1978, 241-249; Lewina, Stolarik 1991, 51-54), 18 have come from the Polish-Ukrainian excavations (Papuci-Władyka 2002, 12-13). Illicit excavations in the area have also been a source of numismatic finds, for example, a hoard of 13 bronze pieces struck in the Odessos mint has been recorded recently (Alekseev, in print). The following is a provisional report; a monograph on the coins from Koshary is planned following the conclusion of fieldwork.

In 2000-2003, eight bronze coins were found at the settlement: four in trench III, three in trench IV and one in trench VIII. Of greatest interest is the mentioned above big cast coin, which came to light in trench III. It bears the head of Demeter on the obverse and a typical Olbian image of an eagle on a dolphin and the letters OΛBIH on the reverse. The coin belongs to the last series of "Olbian Ases", dated by Karyshkovskii to c. 350-330 BC (Karyshkovskii 1988, 57ff.; 2003, 85ff., 161ff., Pls. VI=B-VII=C, XLI-LXII; SNG BM, 390-393; SNG Stancomb, 348). The small bronze piece (Fig. 13) found in trench VIII (see above) with the head of Demeter on the obverse and an eagle on a dolphin on the reverse is also dated to this period (Karyshkovskii 1988, 61; 2003, Pls. XI=A, 10-11, 13-14, CVIII; SNG BM no 448).

Two of the other coins coming from the trench III belong to the so-called "Boristhenes" issue. These coins with a head of the river god Boristhenes on the obverse and an axe and bow in a case on the reverse, represent the most common kind of coin found on the site (Karyshkovskii 1968, 62-85; 2003, 167ff; Dem'anchuk, Turovskii 1999, 19-20; Mielczarek 1992, 17-22). The "Boristhenes" coins were struck for a long time, namely between c. 330 and 250 BC. The chronology of each series is determined according to weight and style, as well as characters or monograms, placed on the reverse of each coin. Both pieces probably belong to Karyshkovskii's group V and could be dated c. 275-260 BC[6]. The last of the coins found in trench III represents a type with the head of Tyche in a turreted crown on one side and an archer on the other. The Tyche/archer type is not dated as precisely as the "Boristhenes" coins (Parovich 1957, 157-159; Karyshkovskii 1962, 113-114; Karyshkovskii 1988, 83; Snytko, Turovskii 1999, 399-406); nonetheless, these coins were stamped not later than about the middle of the 3rd century BC.

Two more "Boristhenes coins" were found in trench IV. Only one of them has a legible monogram, attributable in this case to c. 300-275 BC[7]. The other piece is missing the mono-

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[6] 1. Monogram ΔI; cf. Karyshkovskii 1968, Pl. VI, 3, XII, no 37; Karyshkovskii 1988, Pl. IV, no 42; Karyshkovskii 2003, Pl. XIV=A, 2, CXXXIX; 2. monogram ⋗⊏; cf. Karyshkovskii 1968, Pl. VIII, 9; XII, no 71; Karyshkovskii 1988, Pl. IV, no 76; Karyshkovskii 2003, Pl. XV=A, 8; CL, CLI.

[7] Monogram ΔI; cf. Karyshkovskii 1968, Pl. IV, 4; Karyshkovskii 1988, no 42; SNG BM 481; SNG Stancomb 382-3.

gram, but it can be dated to the same period on the grounds of style and weight. Because of its state of preservation the third coins found in trench IV is not quite legible. Probably it belongs to the issues struck in the first half of the 4th c. BC.

Overall, the structure of monetary finds from the settlement has not changed significantly compared to previous findings. No coins later than the middle of the 3rd century BC have been noted, whereas the percentage of coins from the 4th century BC has grown somewhat. It should be added that the hoard of Odessos coins from illicit excavations mentioned above presumably came from the settlement.

Zol'nik

The exploration of the *zol'nik* was a source of interesting information on rites and rituals (Chochorowski *et al.* 2000, 195; Papuci-Władyka *et al.* 2004, 53-57; Nosova 2003, 123-130). In the Black Sea region, mounds of the kind referred to and are called *zol'nik* in Russian, and are known from different periods and cultures. The term, taken up in Russian and Ukrainian scholarly writing, was introduced by V.F. Gaidukevich to designate the mounds of layered ash that he was exploring in the ancient town of Mirmekion and which he compared to the open air altars, *escharai,* known from Greece and Asia Minor (Gaidukevich 1965, 35). The *eschara* in Olympia, described by Pausanias (*Paus.* V, 13, 8-11), was shaped like a sacred bonfire, an offering to the chthonic gods. Forming the mound were the remains of sacrifices, mixed together with ashes brought from the *Prytaneion*, where the eternal fire of the polis was kept burning. In Greece, *escharai* were known from the 11th/10th century BC to the Sub-Archaic Early/Classical periods (Yavis 1949). However, in provinces like the Black Sea littoral, they remained in use longer and presented a somewhat different nature. In the research of the past few dozen years, the *zol'niks* – especially the structures from the Bosporus region and the Olbian *chora* dating from the late Archaic, Classical and early Hellenistic periods, have been accepted as the best evidence of rituals performed by the inhabitants of the northern Black Sea littoral. While the interpretation of these "sacred dumps" as sacrificial sites (temples?) is commonly accepted, issues surrounding the genesis of these mounds continue to be a source of controversy. It remains to be settled whether the *zol'niks* (as likewise the local kurgans) represented an indigenous "barbaric" custom or were derived from the Greek tradition.

The Koshary *zol'nik* can be interpreted as an *eschara* or open altar by comparison, with the sacred bonfire assemblages from the Greek mainland and the Black Sea littoral. It is similar to examples from the European part of the Bosporus and the Olbian *chora*, and, interestingly, an offering mound of ashes and earth from the sanctuary of Zeus Likaios in Arcadia on the Peloponnesus (*Paus.* VIII, 38,7).

The Koshary *zol'nik* is quite low in height and oval in plan (estimated size 30x20 m, Fig. 20). The objective of the excavations was to record the stratigraphy of the central part of the structure, which had suffered extensively at the hands of illicit diggers. It was found that the ground had been prepared for the open-air altar by removing the soil and leveling the surface with thin layers of yellowish-gray loess, crushed shell fragments, crushed limestone and sand. A clay structure resembling a hearth and a flat bonfire-altar with concentric circles on the surface were discovered in 2002, on a level corresponding to the establishment of the *zol'nik*. Below this level, there was a small hollow in the ground, fenced off with mud bricks.

A cross-section through the mound, dug in the 1998-1999 field season, revealed a complex stratigraphy (Fig. 21), composed of numerous thin, superimposed, layers of clay, gray

ashes (varying in density and hue), algae mixed with mollusk shells and pure sand (these being the thinnest). Intervening layers of sterile loess have been interpreted as evidence of leveling or perhaps some kind of "sanitization" or purification of the offering place. In the thickest place, the mound reached 2.5 m in height. The artefactual assemblage from the *zol'nik* compares to that of the settlement. The fairly well dated imported pottery from the sacrificial mound, points to the second quarter and middle of the 4th century BC as the opening date, although some shards of 5th-century date have also been recorded. The altar appears to have been used into the first half of the 3rd century BC.

Special note was taken of very thin, grayish black layers that looked like burnt bone. They were not homogeneous in character, presumably because of varying organic material (depending on what was being burned as an offering – animal meat or fish) and because oil was used customarily to aid combustion. Most of the fragmentary votive "breads" and "cakes" of clay came from these layers, as did the major part of the remains of offerings and sacrifices. Bone material, including burnt animal and fish bones (also found in other layers), constituted evidence of blood sacrifices, while burnt crop remains (recovered only from these layers) and grain (detected in all layers except the pinkish gray ones) pointed to the existence of bloodless rituals of an agrarian kind.

In a thick gray layer near the top of the cross-section (from the latest period of the functioning of the *zol'nik*), near the center of the mound, there was a wall-like construction of stone forming a semicircular enclosure, the stones burned reddish on the inside (a similar effect was observed on walls surrounding fireplaces in the houses in the settlement). Other "structures" of this kind were more primitive in form, consisting of stones and pebbles set on end on a semicircular plan, surrounding concentrations of potsherds, charcoal, sea grass and remains of offerings. These were probably imitations of bonfires, or individual offering places (Fig. 22). Presumably, a reddish gray soil (remains of burnt offerings?) was scattered over a patch of dark brown and black ashes. A layer of pale gray ash on top of this was in all likelihood the effect of sacrifices being burnt *in situ*. This was again covered with the reddish gray soil and the stones and pebbles were then arranged in place. In a layer even with the bedding of the *zol'nik*, traces of what may have been offerings of honey were identified.

The Koshary mound appears to have been formed in the same way as the *eschara* in Olympia described by Pausanias, but one should bear in mind that the site was in no way comparable in importance to that Greek sanctuary. The reddish gray and pinkish layers of ashes on the altar in Koshary most certainly did not come from a *prytaneion*, but were presumably collected from the domestic hearths that functioned as family altars as well. All the other gray-colored layers of ash were formed as a result of burning offerings on the spot. The layers of fine loess had a ritual as well as "sanitary" meaning. They preserved the remains of sacrifices consecrated to the gods, while preparing the ground for new sacrifices in the future.

The archaeological assemblage from the *zol'nik* resembles that from the settlement (Fig. 23) and consists chiefly of pottery. More than 80% of the pots were wheel-thrown and only an estimated 16% handmade. Finds included artefacts of bone and shell (pendants), clay (loom weights, spindle whorls) and bronze (arrowheads). Bones of domestic and wild animals, as well as fish were identified in huge quantities of the osteological material collected.

The altar mound also yielded three coins (Fig. 24). Two belonged to the Olbian "Boristheneses" series, but only one bore a legible monogram: "API" and could be dated. Based on style and disregarding the low weight, this coin was attributed to the first of the

two series with this monogram and dated to c. 300-275 BC (Karyshkovskii 1968, no. 31, Pl. IV, 8; 1988, no. 33; 2003, Pls. XIII=C, 2, CXXXVI; SNG BM 484; SNG Stancomb 379). The third coin is an interesting small bronze piece of Tyras with the head of the river god Tyras on the obverse and a horse's head and the inscription TYPA on the reverse (Zograf 1957, 69, no. 17, Pl. II, 3; Dem'anchuk, Turovskii 1998, 146, no. 4, Pl. I, 4; SNG BM 342; SNG Stancomb 333. In the latter two cases, the chronology is too low). Coins of this type are dated from the end of the 4th century BC to the first half of the 3rd century BC. Apart from the coins of Odessos issue mentioned above, this is the only coin of other than Olbian provenience to be found at the site (Bodzek, in print). It testifies to the settlement's role in the trade along the northern coast of the Black Sea and is proof of lively relations between Olbia and Tyras in the 4th and 3rd centuries BC (Ruban 1980, 103-106; Karyshkovskii, Kleiman 1994, 120). Like the examples from the town and burial ground, all three coins were struck before the middle of the 3rd century BC.

Objects of a non-utilitarian purpose and possibly connected with cult practices constitute an important group among the finds. One should mention here the votive "cakes" and "breads" of various sizes and shapes, large quantities of round and flat pebbles, clay models of grain (?), round ceramic pieces cut from potsherds, two fragmentary terracotta figurines and small lumps of ochre. Of interest is a set of natural concretions, obviously imbued with ritual significance. Some have noticeable zoomorphic and anthropomorphic features and the repetitiveness of these natural forms indicates that they were collected intentionally.

Two fragments of human skulls and a mandible were also found at the bottom of the mound, while the upper layers yielded one mandible, two shinbones and some phalanges. This is not evidence of human sacrifice, even though most of the bones show cut marks. Like the skulls found at the base of the *zol'nik*, they imply the special character of these offerings, perhaps referring to some kind of foundation rituals. The ceremonies performed at the *zol'nik* (or in its neighborhood) may have been connected in some way with the rites evidenced at the necropolis (i.e., carefully selected and arranged human bones in the offering place no. 72 – Chochorowski *et al.* 2000, 200f.). Further research is necessary before any conclusions can be drawn, but it should be noted that Pausanias mentions likely human sacrifice in reference to the *eschara* of Zeus Likaios in Arcadia (*Paus.* VIII, 38,7).

There were other open altars within the territory of the Olbian *polis*, e.g., the mound at Kozyrka 2 which is believed to lie at the northern border of the Olbian chora (Golovacheva, Marchenko, Rogov 1998, 104-107). The Koshary structure was analogous to it and contemporary, as were the open altars at Glubokaia Pristan' and, most probably others, functioning as the western, eastern and southeastern cult centers and marking the boundaries of the Olbian polis in the late Classical and early Hellenistic periods (Vinogradov 1989, 18-19). The maximal extension of the Olbian polis at this time led to the establishment of new settlements and new sacred areas in effect. The *escharai* of the late Classical and early Hellenistic periods recently uncovered at Koshary and elsewhere in the Olbian *chora* may have served the ritual needs of inhabitants living some distance from the capital.

Necropolis

The excavations of the necropolis by the Polish-Ukrainian expedition in 2000-2003 (Fig. 25) covered 3200 m^2 and revealed 137 graves and other related structures (22 in 2000, 45 in 2001, 36 in 2002 and 34 in 2003) (Chochorowski *et al.* 1999, 61-63; Chochorowski *et al.* 2000, 195-201; Papuci-Władyka 2002, 13-15; Papuci-Władyka *et al.* 2004, 57-62).

Most of the graves encountered in the Koshary necropolis had been already plundered in antiquity. The grave furnishings of the explored undisturbed tombs demonstrated a purely Greek character. Inhumation was the chosen form of burial with just one possible exception, a child burial found in 2002, where the ashes were presumably placed in a black glaze bowl and covered with another bowl. Unfortunately, this grave was just 0.20 m beneath the ground surface and therefore poorly preserved (Redina, Papuci-Władyka 2003, 241).

The most popular type of burial was a niche grave, but chamber tombs and simple pit graves also occurred. Cist graves of stone were discovered during the seasons 2001 and 2003 (131, 231). A cist grave of mud brick (198) came to light in 2002.

Niche graves featured a cavity hollowed out in virgin soil at the bottom of an entrance shaft, usually in its longer northern side (Fig. 26). It was not only the most popular grave type at Koshary, but the most differentiated one as well, with obvious differences in the depth and size of the entrance shafts, the size and shape of the niches, and the construction techniques and material used for the walls blocking the entrance to the niches (Russian *zaklad*). A local nummulithic limestone most commonly was used; occasionally sandstone or reused dressed blocks of stone retrieved from the settlement ruins. Brick or rather sun-dried briquettes of clay usually combined with stone building material was also used.

The entrances to the niches were blocked with upright slabs leaned against the opening with the gaps around them packed with smaller stones (Figs. 26-27). If briquettes were used, they were laid horizontally in several rows, the gaps filled in with briquette fragments and small stones. As a rule, blocking walls matched the size of the niche and the richness of the grave equipment. While this presumably reflected social status, there exist tombs featuring huge stone blockades in the entrances and very poorly furnished burials inside.

The orientation of the niche graves is typically eastern (Greek) and the richness of the furnishings of some of them are elitist in character. Consequently, evidence of plundering was extensive for this category of tombs. A typical grave inventory in the case of the wealthier tombs consisted of an amphora, a cup-skyphos, cup-kantharos or kantharos, and other gifts, such as bronze arrowheads or iron daggers.

Undisturbed and especially richly furnished niche tombs were discovered in the course of the 2000 campaign. Particularly noteworthy are the burials of a warrior (107), a young girl (111) and a child (109).

The warrior's tomb (Fig. 28) was of impressive size and had a wall of several courses of big limestone slabs closing the entrance to the niche. Buried in the tomb was a man aged 35-40. The bones of the skull had accreted at the spot of a wound to the head. The skeleton lay in supine position, extended on its back with the head pointing east. The body had been deposited on a bed of sea grass and a felt textile. The grave goods found next to the head of the skeleton consisted of a Greek amphora from Thasos (Papuci-Władyka, Kokorzhitskaia 2004, 322-323, Fig. 15:1), an Athenian black glaze kantharos from the third quarter of the 4th century BC, an Athenian red-figured lekythos decorated with a palmette dated to the mid-third quarter of the 4th century BC and the traces of an oval probably a wooden plate with iron fittings. A big cut of goat meat had been placed on the plate. The bottom part of a black-glazed bowl (or plate) turned upside down was found next to the bones; it must have been used as a container for salt or some other condiment. The remains of an iron knife with a bone handle were also discovered, partly under the bones of the goat, indicating that the knife had been stuck into the meat during the funeral ceremony. Parts of weapons, the iron tip of a lance and a presumed sword – were identified next to the dead man's head. A leather quiver with arrows had left recognizable

traces on the thighbone. Ten of the arrows lay *in situ*, their tips pointing downwards, the shafts partly preserved. Numerous arrowheads were also uncovered: 66 pieces in all with only two of bone, the rest having been produced of bronze.

Tomb 111 was that of a young girl (Fig. 29, 30). She was laid on a bedding probably made of felt and birch bark, her head oriented to the east. On her right, a quiver with nine arrows had been placed. Bronze rings (some even ornamented) decorated the fingers of both her hands. Vessels stood behind head on the east: a lekythos of gray clay, a black glaze cup-kantharos which had inside it a small black glaze bowl (saltcellar), and two handmade bowls of gray clay which were used as oil lamps. There were also traces of a wooden plate which had contained the meat of a semi-mature sheep (one whole flank), with a bone-handled iron knife stuck into it. Two pairs of bronze earrings were also found here. A circlet of bronze lay on the neck and beads were scattered in the thorax area. Silver pendants in the shape of female heads, presumably Demeter, were found near the top of the skull (Fig. 30).

Of the juvenile burials, burial 109 proved especially rich in finds (Fig. 31). A girl had been buried in the grave, in a supine position with her head to the west. Apart from a small jug that was found by her right hand, the wrist of which was decorated with a bronze bracelet, there was also a gray ware fishplate standing partly on top of the skeleton's lower right leg. The plate had contained the meat of a young sheep. Behind the skull, the bottom of a black glaze vessel was discovered upside down, reused as a container for salt, and next to it, a terracotta figurine of an enthroned goddess lying down, most likely Demeter. Interestingly, this is the first terracotta figurine to be found in a child's grave at Koshary. The finds also included a miniature vase of gray fabric (H. 4.5 cm), beads of glass paste, a spindle whorl of lead and arrowheads, three of bone and one of bronze.

An excellent example of a niche grave was the undisturbed grave 213 discovered in 2003 (Figs. 32, 41). An enormous double coursed wall of limestone slabs blocked the entrance to the niche, in which a male burial had been made, its furnishings composed of 10 bronze arrowheads, one amphora, one kantharos, and an iron dagger with bone handle.

Chamber tombs, consisting of a set of chambers excavated in the rock at the bottom of a deep entrance shaft, were less common (Figs. 33-35). They differed from the niche tombs only in the dimensions of these chambers and the shape of the vaults. Characteristically, the tombs at the Koshary necropolis had no dromos between the shaft and burial chamber, setting them apart from the typical Greek (i.e. Olbian) and Scythian chamber tombs. The blocking of the entrances was the same as in the case of the niche graves (Fig. 35), a common practice being to introduce buttresses and double walls as reinforcement.

The section of the necropolis explored in 2001 and 2002 appears to have belonged to the richer inhabitants of the settlement who invested in chamber tombs of varying dimensions. Altogether twelve such burials were discovered, from a small child's grave (195) to the immense tomb 194. One of the most magnificent of the chamber tombs, unfortunately plundered, was No. 151 (Fig. 33) discovered in 2001. It had two entrances: the main one blocked with stone slabs and a second one leading to the burial chamber; this was in all likelihood the one through which the body was carried into the chamber. The chamber was square and in itself yielded no grave furnishings. Remains of golden beads and some arrowheads were found. The body was laid out following an east-west orientation. It must have been put in a wooden coffin, the four hollows in the floor of the chamber perhaps being the sole proof of where the four corner supports had once stood. The mound covering the burial was barely visible at the time of discovery.

The huge tomb, 194, investigated, in 2002 consisted of an entrance shaft, a vestibule and a burial chamber. Its interest lies in the specific funerary ritual suggesting that a member of the local Scythian aristocracy (chief?) had been buried here. The rites included the typically Scythian practice of accompanying burials of a slave and servant (Fig. 36). The slave had been buried close to the entrance to the tomb; the body was found in a crouched position, the evidence clearly demonstrating that the man had been bound and deliberately put to death. A stonewall, destroyed already in antiquity by tomb robbers, cut off the entrance shaft from the vestibule. Human bones, presumably of the servant, as Scythian custom demanded, were found here as well. There was also an offering stone altar on which libations were made to the underground gods on behalf of the owner of the tomb. An undisturbed wall of stone separated the vestibule from the burial chamber. The limestone blocks were of varying size and included two anthropomorphic stelae of earlier date and an altar for offerings in the form of a quadrangular block with two projections at either end of one of the longer sides. One of the stelae was found to fit the altar – a rare find from ancient burial grounds (Fig. 37). The stelae and the altar must have commemorated the place of another burial and were reused in this tomb, presumably as symbolic protection. Unfortunately, plundering in antiquity had left little but the scant remains of a wooden coffin to testify to the richness of the original burial. Some female bones, presumably of a wife or concubine, accompanied the male skeleton found in this tomb.

The simple pit graves were either oval or rectangular and differed in dimensions and depth. Some traces of stone and brick structures were found in connection with the pits, such as the stone "pavement" covering the burial in grave 202.

A grave uncovered in 2001 (131, Fig. 38), turned out to be the first cist grave from the Koshary necropolis. It was oriented east west and measured 2.55x1.65 m, reaching more than 1 m in depth. It was built of large slabs of dressed stone (0.8x0.65x0.25 m), which lined a pit excavated in the ground. The gaps between the blocks were packed with small stones and soil. The earthen floor may have had some kind of bedding spread over it. One of the blocks of stone (1.65x0.75 m) belonging to the original covering of the pit still survived over the eastern end of the grave. Unfortunately, the grave was found disturbed. Anthropological examination revealed that the man buried in this tomb was a stout individual of 30-40 years of age.

Most of the excavated tombs contained only one skeleton. The few multi-burial tombs included 231, excavated in 2003 (Fig. 39, 45). It was a cist tomb, made of stone slabs, with one skeleton in anatomical position and the remains of five other bodies deposited in parts, suggesting that the dead could have been the participants of some armed encounter.

A considerable number of infant and child burials uncovered in the reported seasons again confirmed the unique character of the Koshary necropolis in this respect. Child burials are typical of Greek society and are seldom encountered in the cemeteries of the indigenous population.

A macabre discovery was made in 2002. A burial of two children was discovered under a small kurgan. Accompanying the bones of the children was the skeleton of a young woman who, to judge by the fetal position in which the body was found, had obviously been tied up and thrown, probably still alive, into the grave (178, Fig. 40).

The burial complexes, which escaped plundering in antiquity, reflect a custom-governed standard in grave goods (Figs. 41-46). Typically of Greek burial custom, and contrary to the Scythian, grave goods are rather scarce and of inferior quality. Many burials (especially of

children) lacked any tomb furnishings whatsoever. The typical set consisted of an amphora for wine, usually imported from Heraclea, Thasos or Sinope, sometimes with stamped handles or necks (Heraclea); a kantharos or other vessel to drink wine from, usually black glaze, and produced in Athens; a gray ware fish plate (probably of Olbian origin); a lekythos or unguentarium containing incense (Fig. 42). Other grave goods occasionally included black glaze bowls, adornments, weapons and utilitarian objects of everyday use. Handmade pots were rare (e.g. in grave 238, Fig. 43). The assemblage of a typical child's grave also included a gray ware milk jug, characteristic of the pottery manufactured in the Greek colonies of the northern coast of the Black Sea (Kowal 2001).

The richest hitherto recorded child's grave (211, Fig. 44), was excavated in 2003 and yielded an assemblage consisting of two bone objects: a cicada and small comb; a lentoid flask probably imported from Asia Minor or the Near East – Cyprus?[8]; an amphora from Thasos; an Athens made kantharos; a small jug (baby-feeder?) probably of local Pontic origin; two silver bracelets spiraled in the form of adders; and two beads made of glass paste.

Arrowheads of bronze were frequent in the graves, usually 2-3 per burial, a set of arrows (the content of a quiver?) being extremely rare. Nine such arrows were found in grave 231 (Fig. 45). Other kinds of weapons, like iron daggers, were rare. Favorite adornments included beads of glass paste, bronze and silver bracelets, and rare bronze and silver earrings. Tools were also found, mainly iron knives with bone handles. Clay spindle-whorls were commonly put in the graves of women and children.

Coins, which were required by Greek custom as a fee for the ferryman Charon, were found in the burials at Koshary for the first time in 2002. Altogether, five coins were discovered. All had been struck in the Olbian mint. One fairly small coin (weighing 0.581 g) was struck in the second half of the 4th century BC (Karyshkovskii 2003, Pls. XCVII-XCIX). Two others represent "Boristhenes" issues; one has the letter Φ on the reverse and belongs to an early series struck about c. 330-320 BC (Karyshkovskii 1968, no 2, Pl. I, 2; 1988, no. 3; 2003, Pls. XII=B, 2, CXXI; SNG Stancomb 367), the other, with the symbol ⁑, may be dated to the period between c. 300-275 BC (Karyshkovskii 2003, no. 49, Pl. VI, 4; 1988, no. 56; 2003, Pls. XIV=C, 6, CXLIII). The last two represent a type with the head of Tyche in a turreted crown on one side and an archer on the other (Fig. 46) (Karyshkovskii 2003, Pl. XII=A, 3; SNG BM no. 536; SNG Stancomb 402).

Other burial-related structures were discovered at the Koshary necropolis next to the tombs. Foremost among these were the offering sites (sometimes with stone altars), showing up on virgin soil as shallow, oval or circular accumulations of charcoal, ashes, crushed potsherds and heavily burnt bones. These patches measured even in excess of 10 m at times. One of the largest structures of this type was feature 224, excavated in 2003 (Fig. 47). One complete but smashed amphora was found in its center. Remains of a funerary banquet were recorded in niche grave 174; it consisted of tableware and amphora handles (one stamped) found against an enclosure wall not far down (Fig. 48).

The evidence from the Koshary necropolis testifies to a cult of the dead being celebrated by the inhabitants of the settlement even after the funeral and mourning period. Offerings in commemoration of the ancestors were made to the gods on days and in seasons specified by

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[8] A Plain White Ware lentoid flask from the District Museum in Larnaca, inv. no. LM 1582/28 dated to the third century BC provides a parallel for our object (on display at Larnaca Airport).

tradition and custom. More information on cult practices can be drawn from other finds, such as special shafts (*bothroi*) sunk over the heads of the dead. In 2001, amphora necks inserted vertically in the ground were identified as offering places of the *bothroi* type for making libations. A stone altar from chamber tomb 194, found reused in a closing wall, evidently served the same purpose (Fig. 37). Like other altars of this kind, it had a hemispherical hollow and grooves aiding in the proper flow of liquid offerings.

The excavations by the Polish-Ukrainian expedition in Koshary in 2000-2003 brought a wealth of new information about the site. Even so, a number of issues concerning the settlement, the *zol'nik* and the necropolis cannot be settled without further analyses and research.

The settlement proved to be a small town with the center situated in the higher eastern part of the promontory (architectural features in trenches III, IV and VII). A fortification wall or embankment may have protected the western confines of the site. In the period of the biggest prosperity, from the second half of the 4th century BC to the beginning of the 3rd century BC, the suburban zone with farms, such as the one discovered in trench VI, was incorporated into the town. The northern and southern limits of the settlement remain to be investigated including the research of the further remains of the "fortifications". It is also unclear whether the structures uncovered in trench VIII in the southern part of the settlement belonged to the "town" or the "suburb".

Further work on dating particular occupation phases is essential in order to clarify the chronological attribution of specific structures. Excavations in the future will also focus on identifying public buildings and sacral features such as temples or chapels, which must have existed in a town of the likes of Koshary.

The location of the settlement on a promontory above the liman suggests the presence of harbor facilities at the foot of this promontory. It should be kept in mind that the liman had once been connected with the sea. Consequently, it is possible that the town had started as small harbor at the foot of the promontory and then expanded onto the promontory. If the assumption about the harbor is correct (and it seems self-evident), then the remains of the port facilities should be buried somewhere under the silt sediments at the foot of the promontory. Obviously, there must have existed some kind of passage between the two parts of the settlement, the "upper" and "lower" towns. Future excavations will be aimed at shedding light on this issue as well.

Assuredly, completing the investigation of the *zol'nik*, as well as in the area south of trenches VII and VIII, proceeding in the direction of the *zol'nik*, should answer questions about the position of this offering place regarding the town and particularly whether it was located within the confines of the settlement or not.

With respect to the necropolis, it is now clear that the burial ground had been in use from the end of the 5th century BC until the middle of the 3rd century BC, corresponding to the occupation of the settlement. Most of the graves date from the acme of the town's development, which fell in the second half of the 4th century BC and the beginning of the 3rd century BC. The number and character of the structures uncovered at the necropolis to date (250 in all) are indicative of a well-populated town with clear economic, spiritual and cultural ties with the Olbian polis. The precise extent and layout of the necropolis needs to be determined. Further work should also help to interpret the funerary rituals celebrated at the cemetery and to explain the nature of the relations between the Greeks and the indigenous, chiefly Scythian, tribes.

Finally, there is the issue of when and why the Koshary site was abandoned. The town was at the height of its prosperity, as judged by the architectural remains and artifacts found, between the second half of the 4th and the first half of the 3rd century BC. This corresponds to the period of Olbia's highest development (Kryzhitskii, Krapivina 2001, 32). No evidence of a violent conflagration or armed struggle has yet come to light at the Koshary site. The abandonment of the town appears to be linked to the general decline of the Olbian *chora* around the middle of the 3rd century BC, which was the outcome of a difficult military and political situation in the steppes around the town. Extensive exploitation of steppe land pastures caused an ecological crisis which, coupled with an increasingly dry and warm climate, drove the various nomadic tribes to migrate. Especially the Sarmatian, moving in from the east, contributed to the political instability of the seventies and sixties of the third century BC, what affected the Scythian centers, as well as the Greek cities and their neighborhood (Kryzhitskii *et al.* 1989; Kryzhitskii 1997, 112; Chochorowski, 1999, 332ff.). Clearly, the decline of Koshary is an important subject for further research over the next few seasons.

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